Emmanuel Oladokun

📞 (+44)7786256943 | ✉ emmanueloladokun@hotmail.co.uk | 🔗 linkedin.com/in/emmanuel-oladokun1

Summary

Applied AI engineer with a background in **generative modelling**, foundation models, and image and video analysis. Experienced in **rapid prototyping** and evaluating models on large, noisy real-world datasets, with peer-reviewed publications in international conferences and industry collaboration. Comfortable working independently and within teams.

Work and Research Experience

Alan Turing Intern, GCHQ
Jan 2024 – Jul 2024

- **Gathered and curated data** from multiple sources to generate a large, high-quality image dataset.
- Researched, implemented, trained, and applied state-of-the-art **generative models** to tackle real-world large-scale problems, with careful attention to **evaluation, robustness, scalability,** and **responsible use of sensitive data**.

Developer & Supervisor, University of Oxford / GE HealthCare
Oct 2020 – Jun 2022

- Co-developed and maintained an open-source tool for automated validation of DICOM images, ensuring data quality and adherence to privacy standards. `github.com/Extensible-Clinical-Imaging-QC-Tool/ECIQC`
- Led technical design and implementation using both C++ and Python, including setting up CI/CD pipelines and automated tests to ensure reliability as the codebase evolved.
- Supervised early-stage PhD students, mentoring on software development practices and contributing to key project deliverables.

Master's Thesis Research, University of Oxford
Oct 2019 – Jun 2020

- Used Python and MATLAB to develop mathematical and statistical models for the circadian blood pressure rhythm.
- Managed and performed statistical analysis on **noisy data** consisting of **4M records** from 208,948 hospital admissions.
- Worked strategically with a supervisor to meet challenging research deadlines.
- Achieved a mark of **71 (First Class)** for the Master's thesis.

Software Engineering Intern, Schlumberger
Jul 2019 – Sep 2019

- **Reduced computational costs by 30–50%** within a production reservoir simulator by using machine learning models.
- Successfully developed machine learning models using Scikit-Learn and TensorFlow.
- Swiftly adapted to a new **high-pressure environment**. Findings of this internship have led to a publication.

Undergraduate Research Assistant, University of Oxford
Jul 2018 – Sep 2018

- Researched Offshore Renewable Energy using models of wind turbines developed in MATLAB.
- Tackled challenges such as performing experiments using the **UK's largest functioning wave tank**.
- The autonomy of the role strengthened work ethic and personal management skills.

Achievements

Publications (top-tier applied ML/CV venues)

- Oladokun, E. et al. (2025); From Transthoracic to Transesophageal: Cross-Modality Generation using LoRA Diffusion; International Workshop on Advances in Simplifying Medical Ultrasound (ASMUS), held at the International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI).
  `Best Paper Award; Diffusion Models; Cross-Modality Learning; Parameter-Efficient Fine-Tuning`
- Oladokun, E. et al. (2023); Transesophageal Echocardiography Generation using Anatomical Models; International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI).
  `Generative Adversarial Networks; Contrastive Unpaired Translation; Synthetic Data`
- Oladokun, E et al. (2020); Machine-Learning Informed Prediction of Linear Solver Tolerance for Non-Linear Solution Methods in Numerical Simulation; ECMOR XVII
  `Random Forest Regression; Linear Algebra`

Awards

- **Best Paper (Sep 2025):** Awarded **'Best Paper'** at ASMUS-MICCAI 2025 for paper addressing diffusion-based image generation using data from multiple domains.
- **Google Hackathon (Oct 2019):** Co-conceived and developed a machine learning–based application to support handwriting learning for people with cerebral palsy and related needs. As a team, refined the concept and delivered a working **prototype in less than 24 hours**, earning 2nd place out of 12 teams. `github.com/HandRiGht/handright/blob/master/README.md`
- **Physics Olympiad (Apr 2016):** Awarded a Commendation
- **UKMT Maths Challenge (Nov 2015):** Awarded a Silver Certificate.

Skills

Programming Languages & Libraries: Python, MATLAB, C++ **;** HuggingFace, **PyTorch**, Torchvision, **AWS, Ollama, LangChain**, LiteLLM, Langfuse, LangGraph, NumPy, SciPy.

Methods: Generative modelling, (latent) diffusion models, foundation models, flow matching, representation learning, contrastive learning, **vision–language models (e.g., CLIP)**, transformer architectures

NVIDIA Certification: Rapid Application Development with Large Language Models (LLMs)

Education

DPhil Engineering Science CDT, University of Oxford　　　　(viva pending; period includes internship) 2020 – 2026

Since Oct 2021, focused on **applying deep generative models** to the creation of synthetic datasets for downstream model training and evaluation. Using **computer vision** techniques, designed, trained, and **evaluated models end-to-end**, resulting in **first-authored publications** and **international conference presentations**. The developed methods generate synthetic images that demonstrably improve performance on **multiclass segmentation** tasks when augmenting real-world datasets. The most recent project used **flow matching** for few- and **one-step latent video generation**, in collaboration with GE HealthCare.

MEng Engineering Science (2:1), University of Oxford　　　　　　　　　　　　　　　　　2016 – 2020

Modules include: **Machine Learning** (Generative and Discriminative Models), Optimisation, Advanced Probability, Software Engineering; Medical Imaging and Informatics (**Deep Learning, Computer Vision**), and Image Processing.

A-Levels, Loreto Sixth Form:　　　　　　　　　　　　　　　　　　　　　　　　　　　2014 – 2016

Mathematics **(A*)**, Further Mathematics **(A)**, Physics **(A)**, and Chemistry **(A)**

Leadership and Service

Engineering Tutor, St Peter's College　　　　　　　　　　　　　　　　　　　　　　　　2022
- Delivered tutorials in Mathematics and Physics for first-year engineering students, and assessed problem sheets

Volunteer, THRIVE　　　　　　　　　　　　　　　　　　　　　　　　　　Nov 2018 – Dec 2022
- Equipped future leaders in deprived communities with key skills and values by leading a weekly sports session.
- Ensuring children are safe and well provided for during excursions, contributing to a positive environment and lasting memories.

Student Ambassador, Schlumberger　　　　　　　　　　　　　　　　　　　Sep 2019 – Sep 2020
- Actively publicised opportunities at Schlumberger and increased awareness across the university.
- Shared internship experience at career fairs and provided consultations for potential applicants.

Alumni Relations Officer, St Peter's College, University of Oxford　　　　　　　　Nov 2016 – Jun 2018
- Established strong ties as an ambassador through connecting undergraduates with alumni, and networking with professionals.
- Raised **£5,862** for the college during a telethon and learned protocols for dealing with sensitive and confidential information.

Interests

Football: Played collegiate football including inter-college 'Cuppers' competitions at Oxford; currently play for fun.

Drumming: Active drummer, rehearsing independently, corporately, and performing monthly in live services to congregations of up to 200 people.